O'Reilly, Talbot & Okun
ENGINEERING ASSOCIATES

March 19, 2019
File No. 5171-06-01

Mr. James Bedard, Director of Environmental Management and Capital Projects
Worcester Public Schools
20 Irving Street
Worcester, MA 01609, MA 02035

RE: February 2019 - PCB BMP Quarterly Status Report
Burncoat High School

Dear Mr. Bedard:

In accordance with the Worcester Public School's (WPS) request, O'Reilly Talbot & Okun Associates, Inc. (OTO) is pleased to present this independent quarterly status report of the Best Management Practices (BMPs) implemented at the Burncoat Memorial High School (Burncoat). The objective of the BMP program is to reduce potential exposures to polychlorinated biphenyls (PCBs) that may be present in building materials within the school. WPS and its staff are responsible for implementing the BMPs, and OTO conducts quarterly evaluations to provide WPS management with an independent assessment of the effectiveness of their implementation.

As you know, certain building materials used in the construction and renovation of school buildings during the period from 1950 to 1980 may contain PCBs. The US Environmental Protection Agency (USEPA) has recommended that a BMP program be implemented in schools that were either built or renovated during this period. Burncoat High School was constructed during this period.

Note that separately, WPS has also requested OTO to conduct indoor air monitoring for PCBs at Burncoat. The results of the three air testing rounds completed to date have been provided to WPS in separate reports. As we noted in those reports, all results have been well below USEPA guidelines.

Best Management Practices

In USEPA's July 28, 2015 guidance for school administrators and other building owners and managers titled "Practical Actions for Reducing Exposure to PCBs in Schools and Other Buildings," potentially useful BMPs are described, including:

1. Ensuring that ventilation systems are operating properly and are regularly inspected and maintained according to system manufacturer instructions and guidelines or ANSI/ASHRAE/ACCA Standard 180-2012—Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems. If system cleaning is needed, follow ANSI/ACCA Standard 6–Restoring the Cleanliness of HVAC Systems (2007);
2. Cleaning inside schools and other buildings frequently to reduce dust and residue;
3. Using a wet or damp cloth or mop to clean surfaces;

4. Using vacuum cleaners with high efficiency particulate air (HEPA) filters;
5. Not sweeping with dry brooms or using dry cloth wipes for dusting;
6. Washing hands with soap and water, particularly before eating; and
7. Washing children's toys.

We understand that WPS has modeled its BMP program for Burncoat High School using these guidelines. OTO's assessment of BMP effectiveness focuses on items 1 through 5 on this list. Regarding item 6, all school lavatories are equipped with soap and water and it is the responsibility of students and staff to maintain personal cleanliness. Item 7 on the list is not relevant to a high school environment.

Assessment of BMPs at Burncoat High School

We conducted our BMP assessment at Burncoat on November 21, 2018. We reviewed the operation of the HVAC/air handling equipment with school engineering staff. The system underwent a significant overhaul approximately one year ago and was operating properly at the time of the BMP assessment.

OTO observed thirty rooms selected at random during the assessment at Burncoat, roughly 25% of rooms in the school. Our observations of these rooms focused on the presence of dust on windows, window sills, and window frames as well as on the condition of the Univent systems that provide heating and ventilation. The rooms we observed included:

- Library,
- Administrative offices;
- Selected classrooms, and
- Hallway areas.

Our general observations are summarized on Table 1 (attached); representative photographs are also attached. We discussed cleaning procedures with school staff, emphasizing the importance of consistency with the BMPs. We were assured by staff that the BMP recommendations were routinely followed in the school.

Based on our discussions and observations, it is our conclusion that the implementation of the BMPs at Burncoat is very effective. The vents to the HVAC plenum that serves most of the building were free of significant dust and debris. The observed windowsills and blinds exhibited little dust. The storage of educational materials on windowsills and air vents, which was observed in previous visits, has been reduced.

Other USEPA Recommendation for Suspected PCBs in Schools

Although not technically BMPs, USEPA made three other recommendations in its July 28, 2015 guidance for PCBs in schools:

- Remove all PCB containing fluorescent light ballasts (FLBs);

- Give consideration to encapsulating suspected PCB containing materials (such as caulk) to further reduce the potential for PCB exposure; and
- Removing suspect PCB containing building materials during planned renovations and repairs.

As you know, WPS removed all suspect PCB containing FLBs in 2012. There are no suspected PCB FLBs remaining in the Worcester school system.

Also in 2012, WPS encapsulated the suspect PCB containing caulk around all of the windows at Burncoat with an additional thick layer of non-PCB caulk. Exterior suspect caulking was likewise covered with new caulk to a height of eight feet above grade. No significant deterioration of the uncovered exterior caulking at the tops of window units was observed. This over-caulking is repaired on an as-needed basis to maintain its condition.

Finally, it is noted that WPS applying to the state sponsored school building financing program for help with the replacement of the Burncoat High School building. It is estimated that the current building will be replaced in approximately seven years. When Burncoat is replaced, the suspect PCB containing materials will be removed and disposed of in accordance with USEPA requirements.

Conclusions and Recommendations

In conclusion, it is our opinion that the BMPs are being implemented in an effective manner at Burncoat High School. We recommend that the next quarterly on-site visit be conducted in May 2019.

Should you have questions or require additional information, please contact the undersigned.

Very truly yours,
O'Reilly, Talbot & Okun Associates, Inc.

Thomas B. Speight, CHMM
Project Manager

James D. Okun, LSP
Principal

Attachments

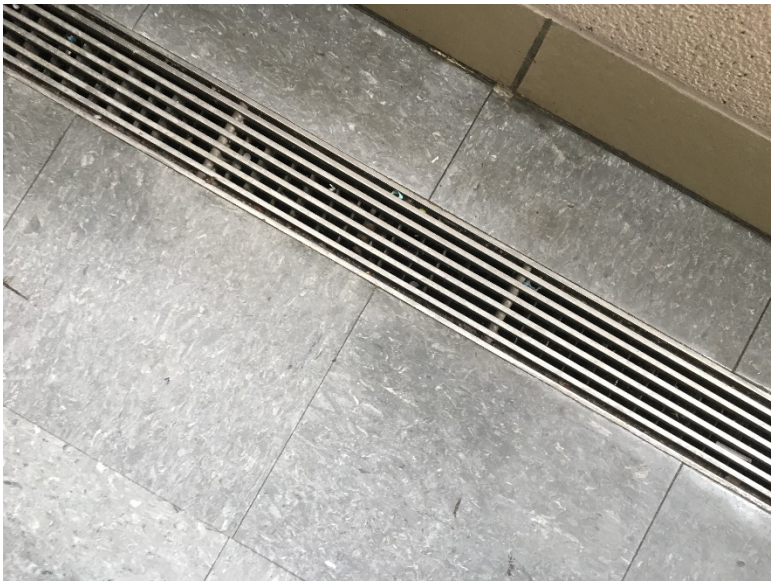
Table 1 – Summary of Observations for Burncoat High School
Selected Photographs from Burncoat High School

Table 1 - Summary of BMP Observations
Burncoat High School
179 Burncoat Street
Worcester, MA 01606
February 22, 2019

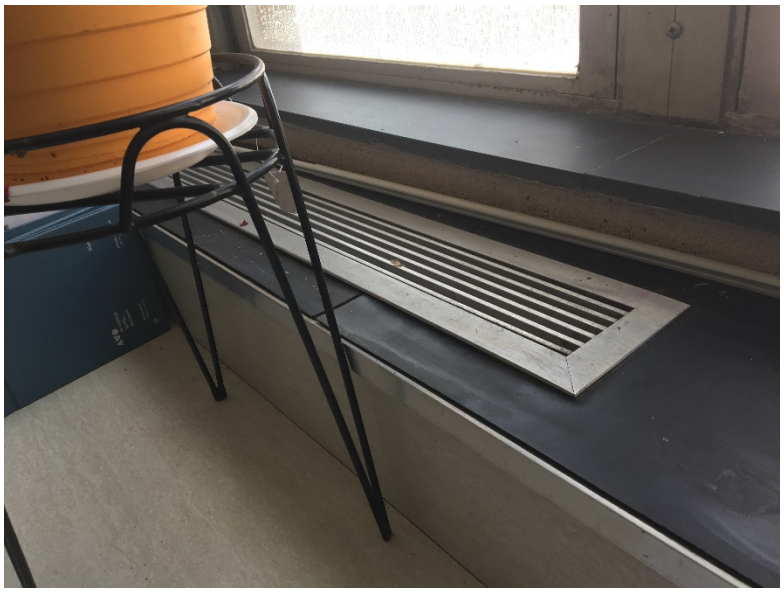
Room	Caulk	Vents	Dust Accumulation
Main Office	VG	NA	VG
Guidance	VG	NA	VG
A14	VG	VG	VG
Hallway by A16	VG	NA	VG
A18	VG	VG	VG
B3	VG	VG	VG
B4	VG	VG	VG
B10	VG	VG	VG
B15	VG	VG	VG
Cafeteria 1	VG	VG	VG
C1A	VG	VG	VG
C3	VG	VG	VG
C4	VG	VG	VG
Library	VG	VG	VG
C8	VG	VG	VG
C9	VG	VG	VG
C21	VG	VG	VG
D3	VG	VG	VG
D6A	VG	VG	VG
D14	VG	NA	VG
D18	VG	NA	VG
D24	VG	NA	VG
Hallway by gymnasium	VG	VG	VG
E1	VG	VG	VG
E5A	VG	VG	VG
E6	VG	VG	VG
E6B	VG	VG	VG
F2	VG	NA	VG
F4	VG	NA	VG
F6	VG	NA	VG

CATEGORIZATION
Very good = minimal dust or debris
Little = enough dust to leave a residue on a gloved finger
Moderate = visible accumulations of dust
Significant = thick layer of dust

Site Photographs

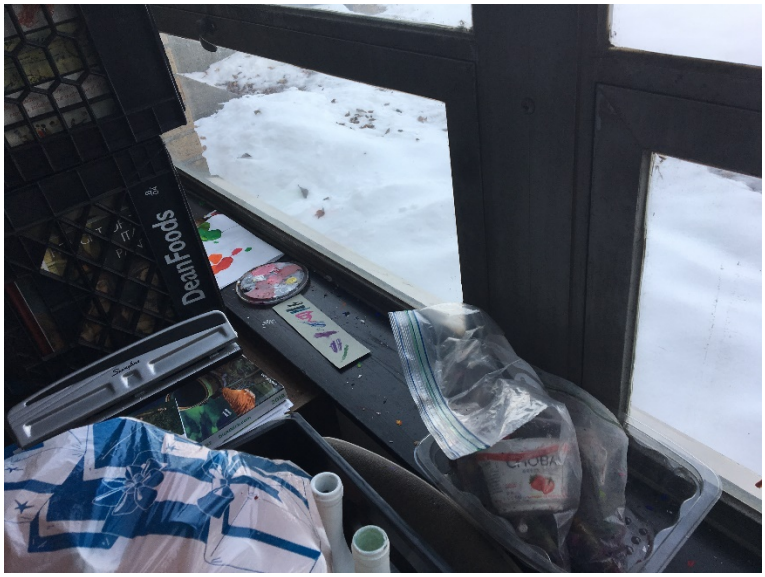


Photograph 1: Typical floor vent, Room A18

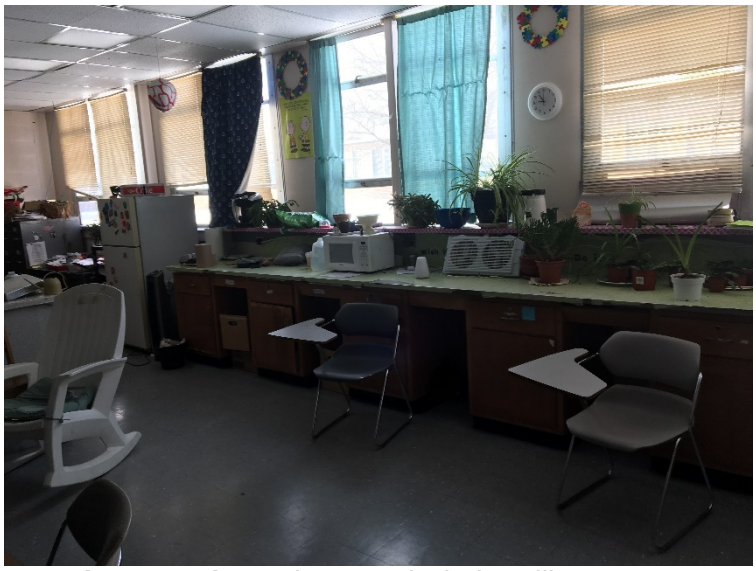


Photograph 2: Windowsill in Room B15

Site Photographs

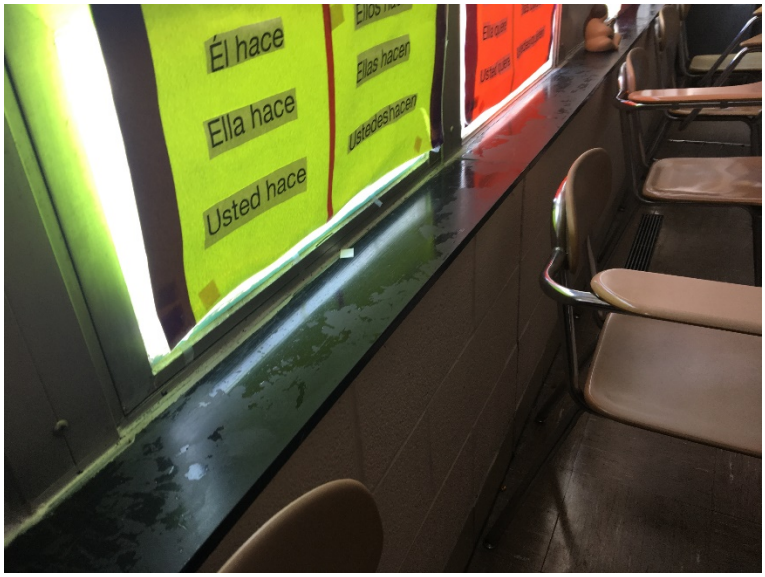


Photograph 3: Windowsill, Room B10

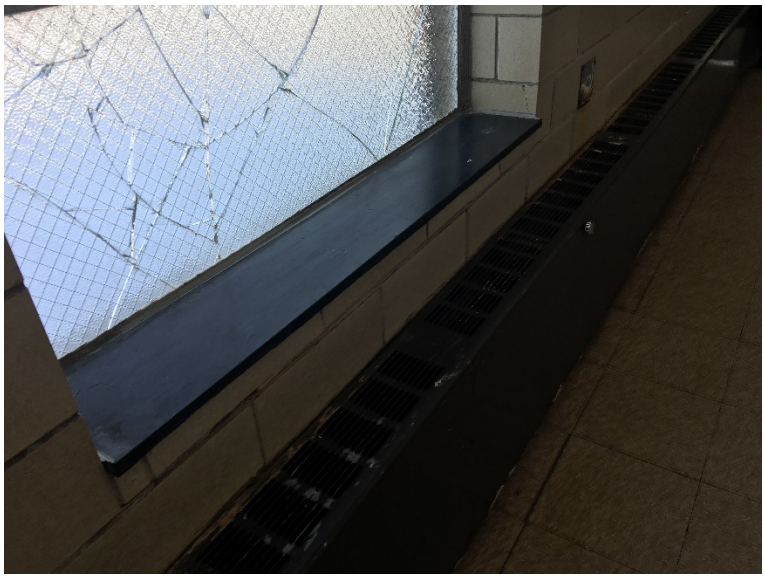


Photograph 4: Obstructed windowsill, Room E6

Site Photographs



Photograph 5: Windowsill in room B4



Photograph 6: Windowsill in hallway by gymnasium